U.S. Economic Update Construction Financial Management Association

Federal Reserve Bank of Chicago May 25, 2017 Paul Traub Senior Business Economist



Main Economic Indicators

Year-over-year Comparison

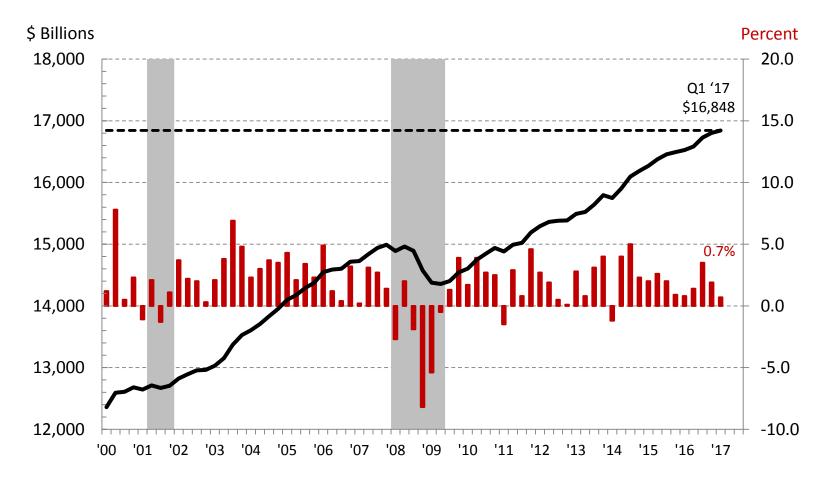
| | 2015 | 2016 | 2017 |
|---|-------|-------|-------|
| GDP – Annual Growth Rate ¹ | 1.9% | 2.0% | 1.9 |
| Unemployment Rate ² | 5.3% | 4.9% | 4.7% |
| Participation Rate ² | 62.7% | 62.8% | 63.0% |
| Nonfarm Job Growth ³ | 226.1 | 186.7 | 175.7 |
| PCE Core Inflation Yr. / Yr. ⁴ | 1.4% | 1.7% | 1.7% |

- 1. 2015 & 2016 Q4/Q4, 2017 Q1 '16 / Q1 '17
- 2. Annual Average & March 2017 YTD
- 3. Average Monthly Job Growth in Thousands- SA, March 2017 YTD
- 4. Annual Average Percent Change Year-over-year Core PCE & March 2017 YTD

Source: U.S. Bureau of Economic Analysis, Census Bureau and Bureau of Labor Statistics

U.S. Real GDP

Billions Chained \$2009, % Change Q/Q at SAAR

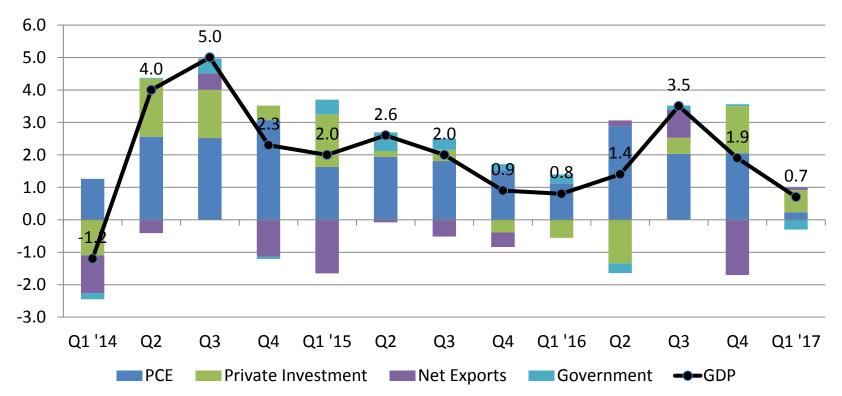


Source: U.S. Bureau of Economic Analysis

U.S. Real GDP

GDP and Contribution to Percent Change, Q/Q at SAAR

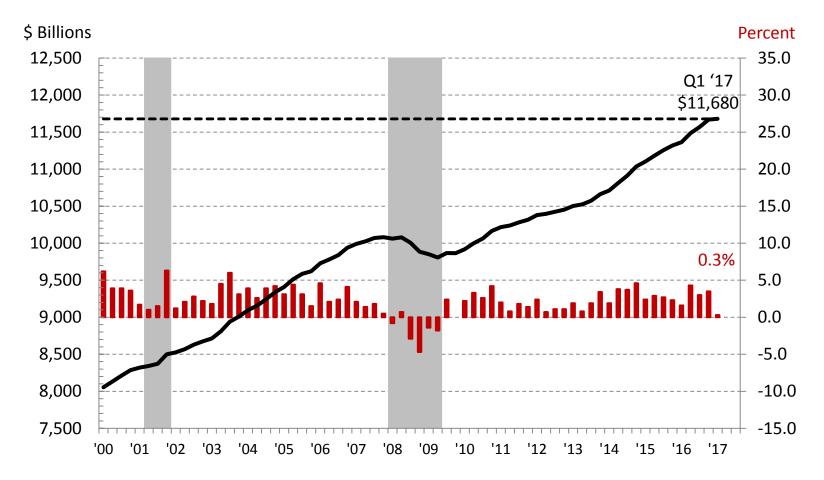
Percent



Source: U.S. Bureau of Economic Analysis, September 2016 Blue Chip Economic Indicators.

Real Personal Consumption Expenditures

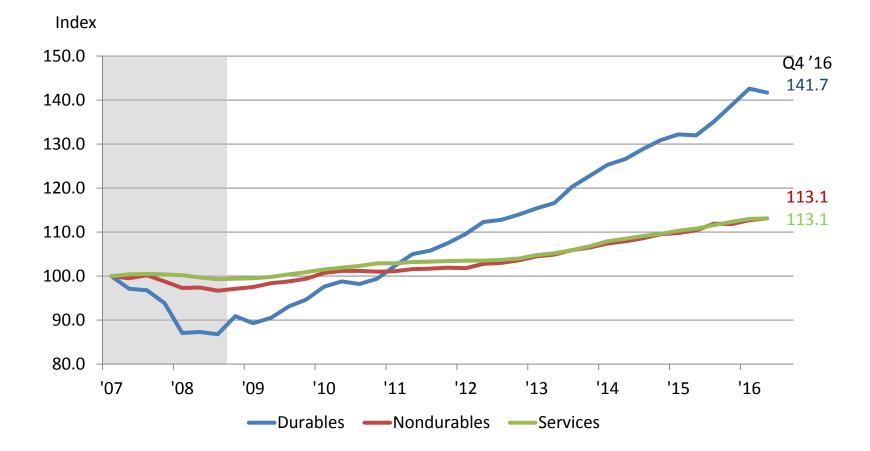
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

Real Personal Consumption Expenditures

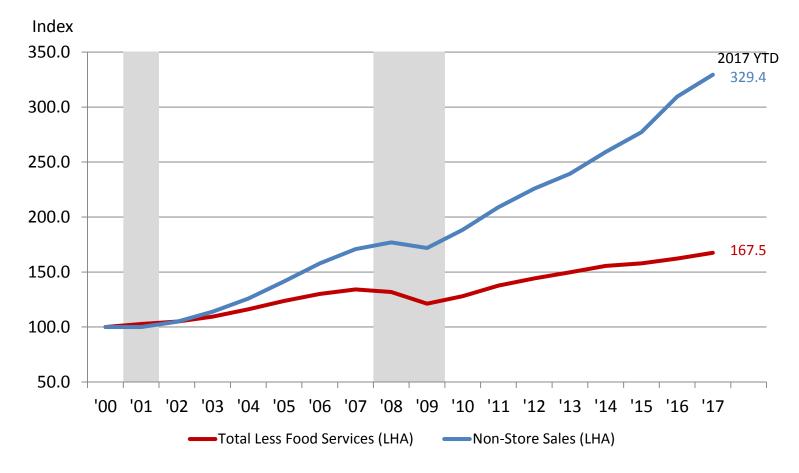
Index, Q4 2007 = 100



Source: Author's calculations using data from the BEA

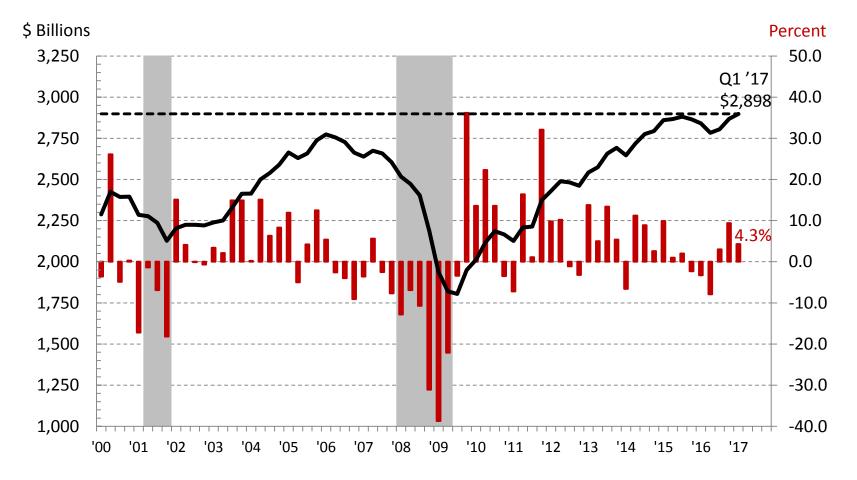
Retail Sales – Non-store Sales

Index 2000 = 100 and Share of Growth



Real Gross Private Domestic Investment

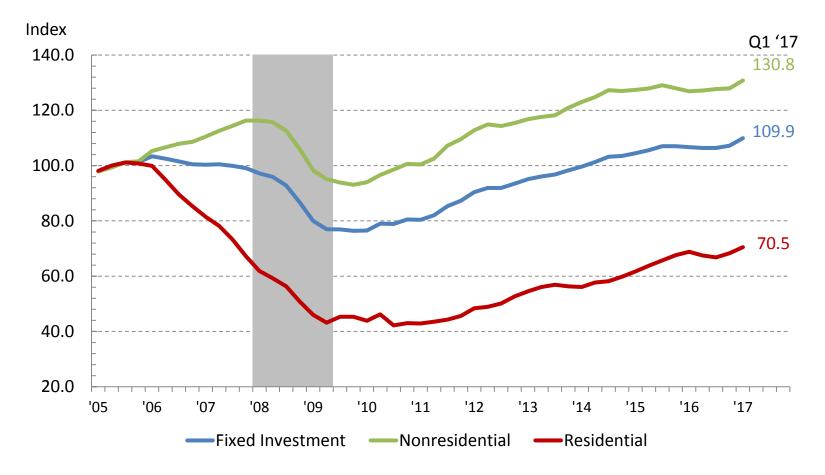
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

Real Domestic Fixed Investment

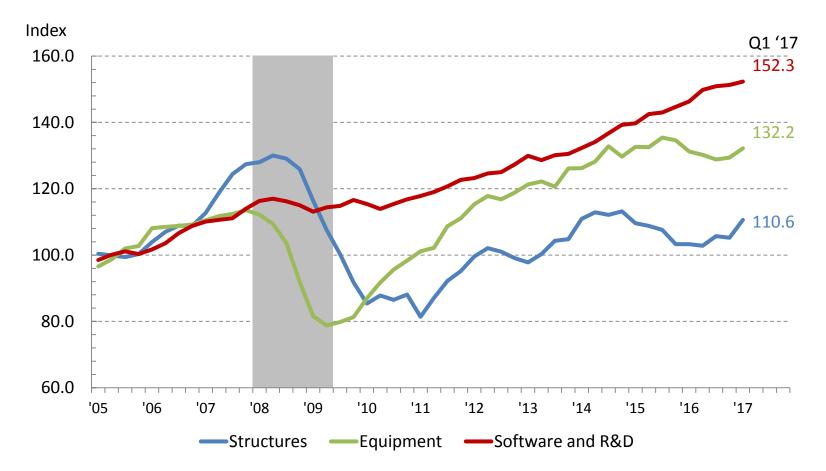
Billions Chained \$2009, Index - 2005 = 100



Source: U.S. Bureau of Economic Analysis

Real Domestic Nonresidential Fixed Investment

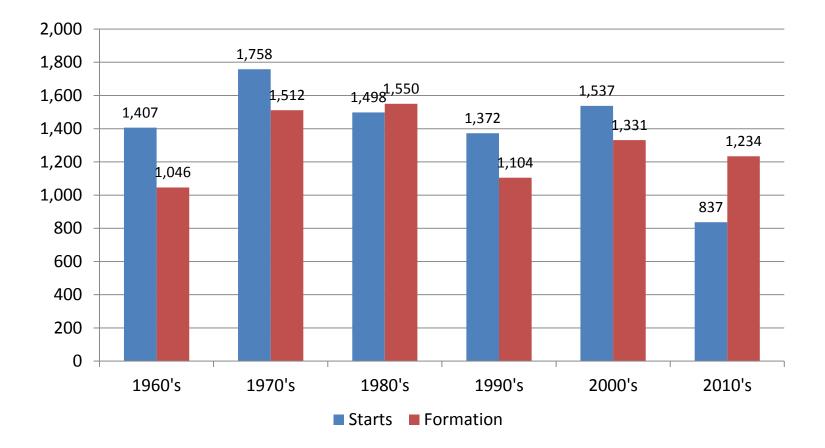
Billions Chained \$2009, Index - 2005 = 100



Source: U.S. Bureau of Economic Analysis

U.S. Housing Starts & Household Formation

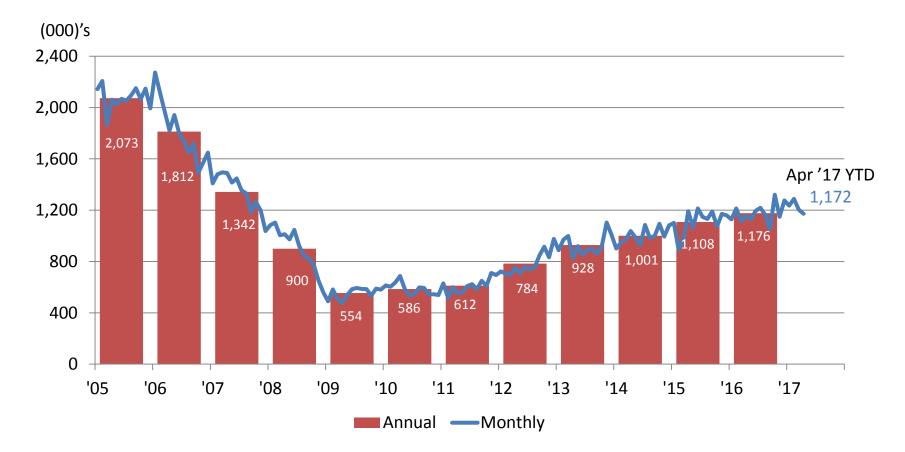
In Thousands of Units – Averages by Decade





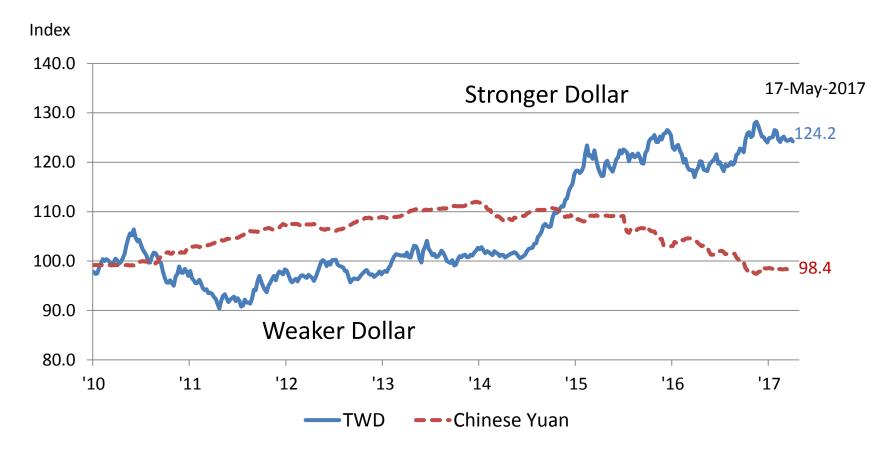
U.S. Housing Starts

In Thousands of Units (SAAR) – Annual Average & Monthly Data



The U.S. Dollar

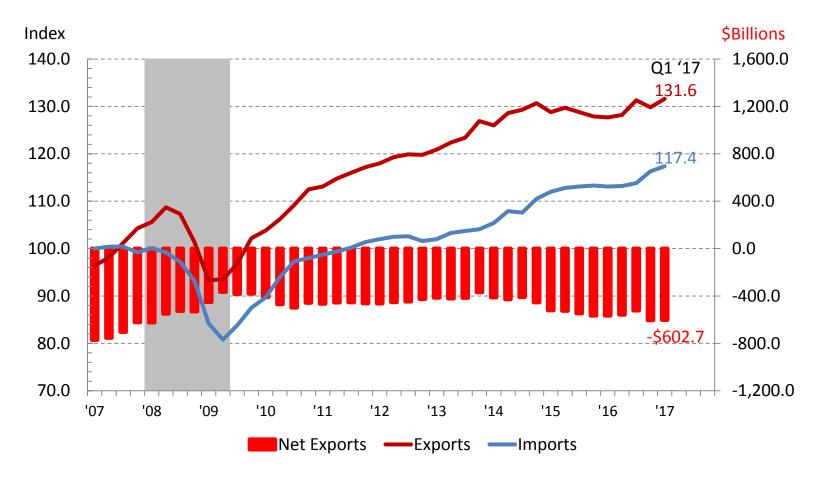
Trade Weighted Dollar and US to Chinese Yuan – Index 2010 = 100



Source: Federal Reserve Board and Haver Analytics

Real Net Exports of Goods & Services

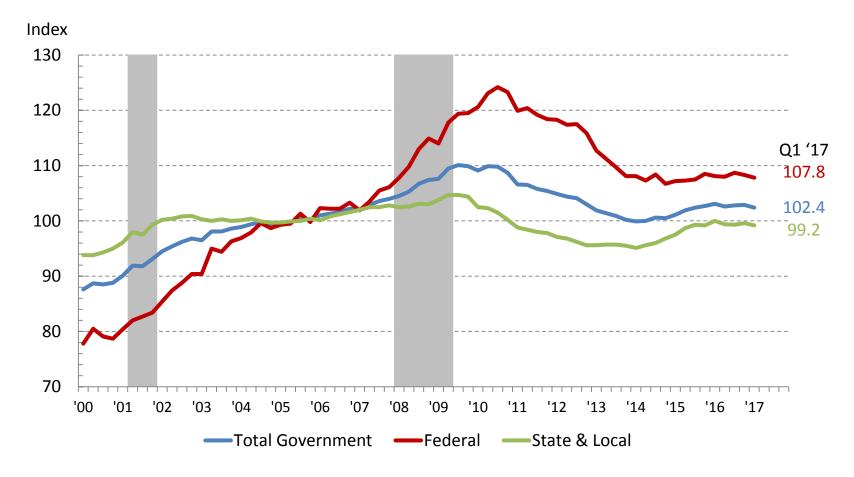
Billions Chained \$2009, Index - 2007 = 100



Source: U.S. Bureau of Economic Analysis

Real Government Consumption & Investment

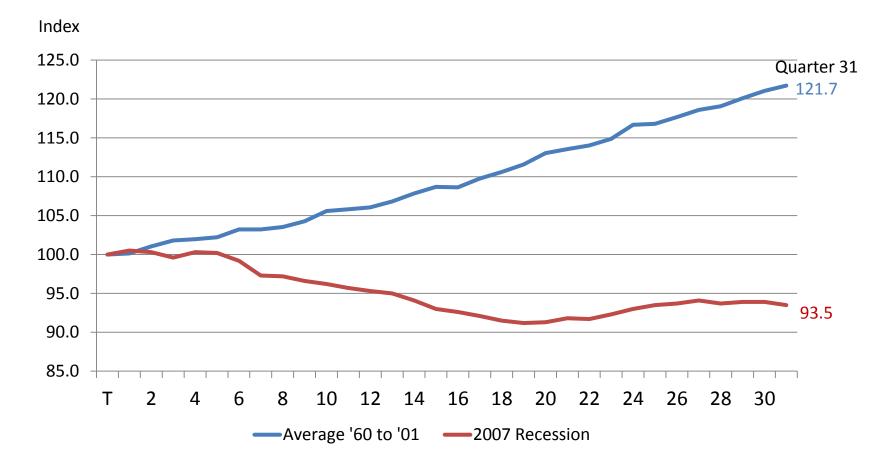
Billions Chained \$2009, Index - 2005 = 100



Source: U.S. Bureau of Economic Analysis

Real Total Government Consumption & Investment

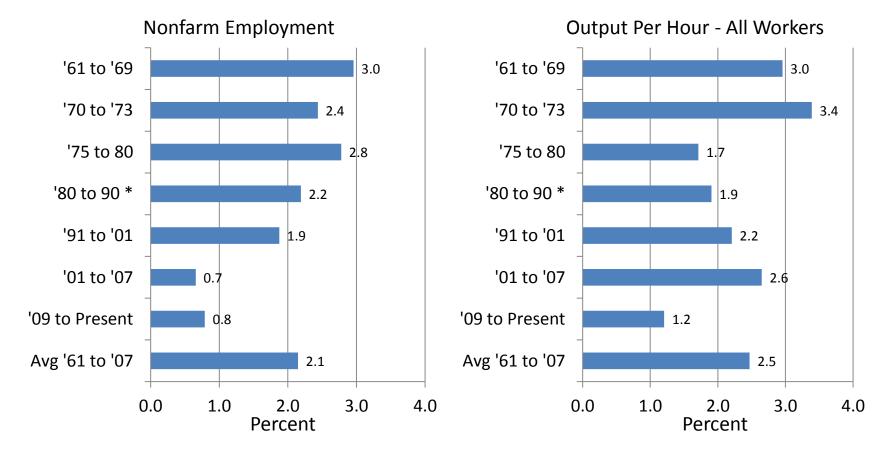
Average Post-Recession Recovery, Index – Recession Trough = 100



Source: Author's calculations using U.S. Bureau of Economic Analysis data.

U.S. Employment and Output Per Worker

Average Percent Growth by Expansion Period, 1961 to Present

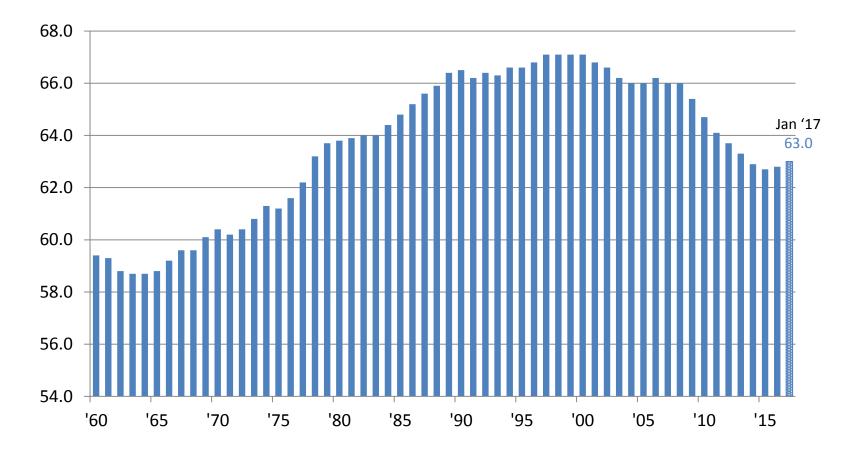


* Combined 1980 to 1981 and 1981 to 1990 expansions.

Source: U.S. Bureau of Labor Statistics

Labor Force Participation Rate

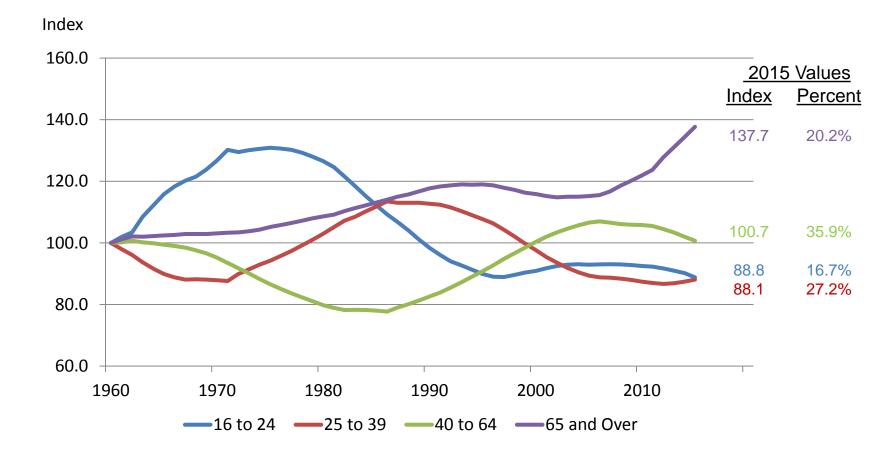
Percent of Noninstitutionalized Civilian Population – Annual Average



Source: U.S. Bureau of Labor Statistics

Working Age Population by Age

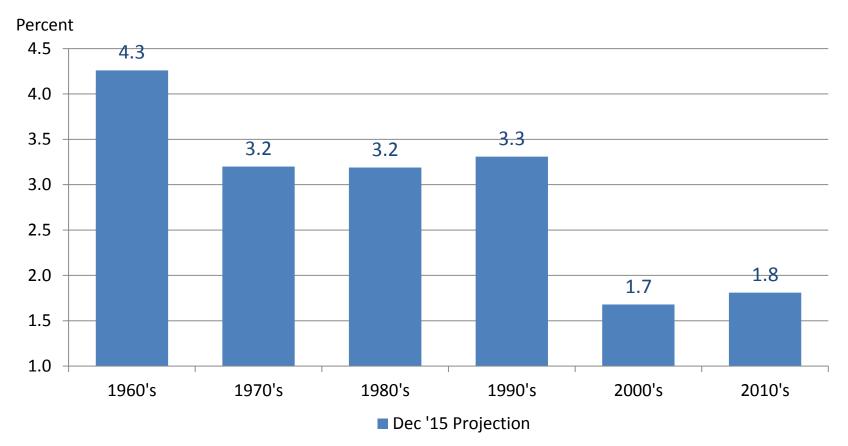
Select Age Categories, Percent of Total, Index – 1960 = 100



Source: U.S. Census Bureau – Table HH-3, Households by Age

Economic Potential by Decade

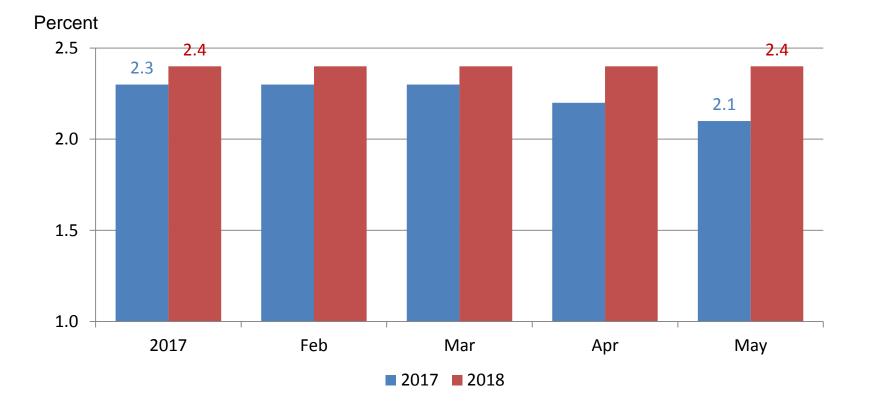
Real GDP Percent Change – Annual Average



Source: U.S. Congressional Budget Office

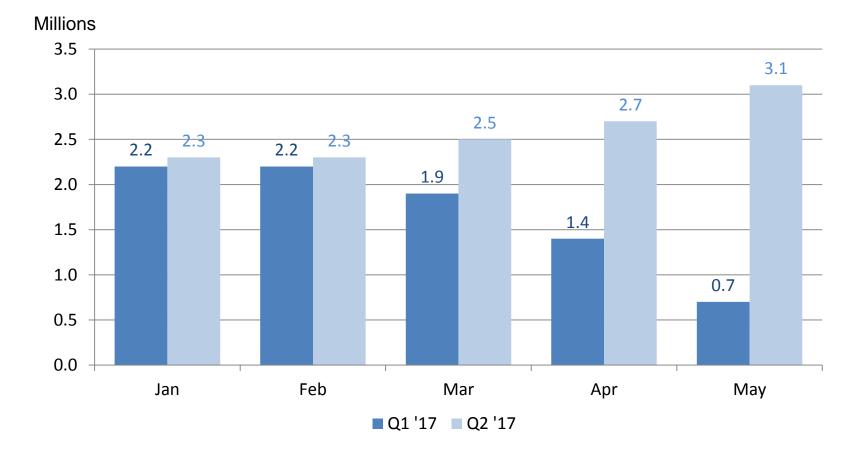
U.S. Real GDP Blue Chip Forecast

Annual Percent Change – Billions of Chained \$2009



U.S. Real GDP Blue Chip Forecast by Month

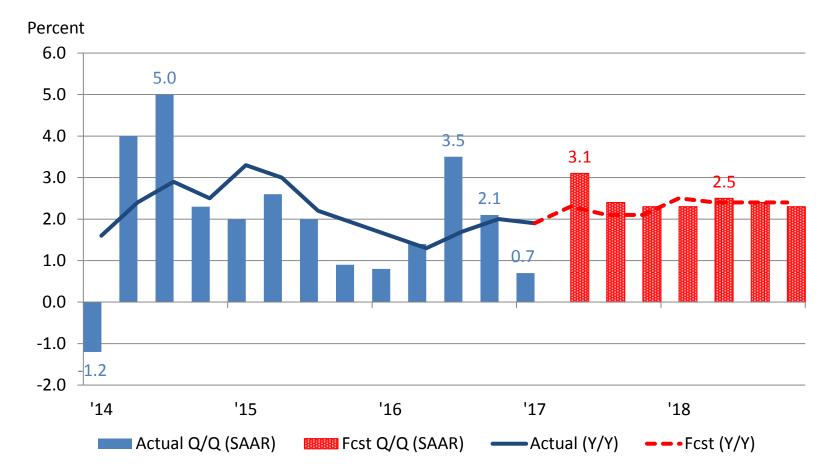
2017 - Q1 & Q2 - Percent Change, Q/Q (SAAR) – Billions of Chained \$2009



Source: Blue Chip Indicators – May, 2017 Consensus.

U.S. Real GDP Blue Chip Forecast

Percent Change – Billions of Chained \$2009

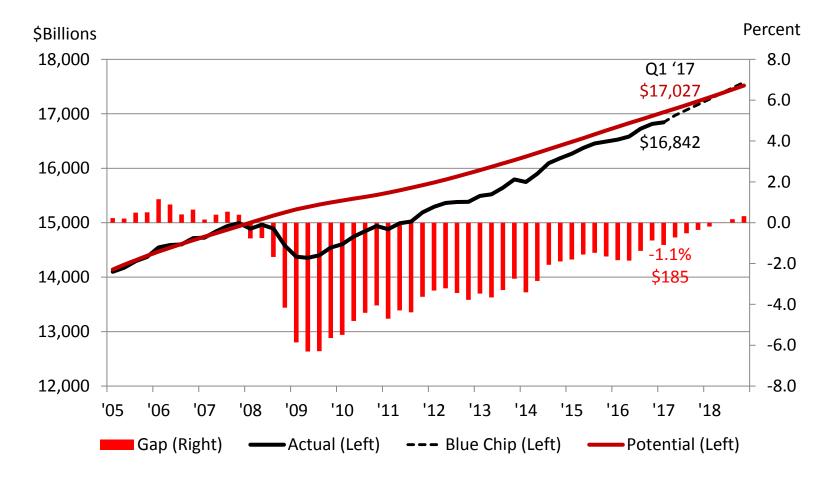


Source: BEA and May Blue Chip Economic Indicators

Federal Reserve Bank of Chicago

U.S. Real GDP – Actual and Potential

Billions Chained \$2009 and Percent of Actual

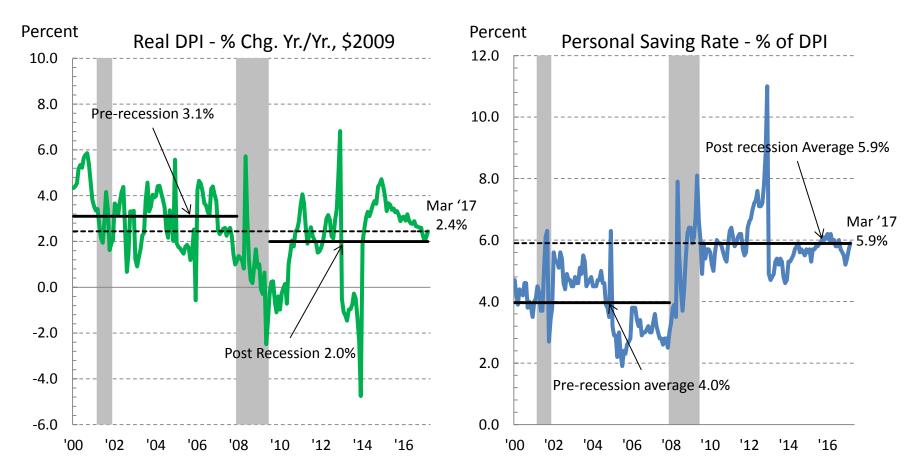


Source: Bureau of Economic Analysis and the U.S. Congressional Budget Office

U.S. Consumer

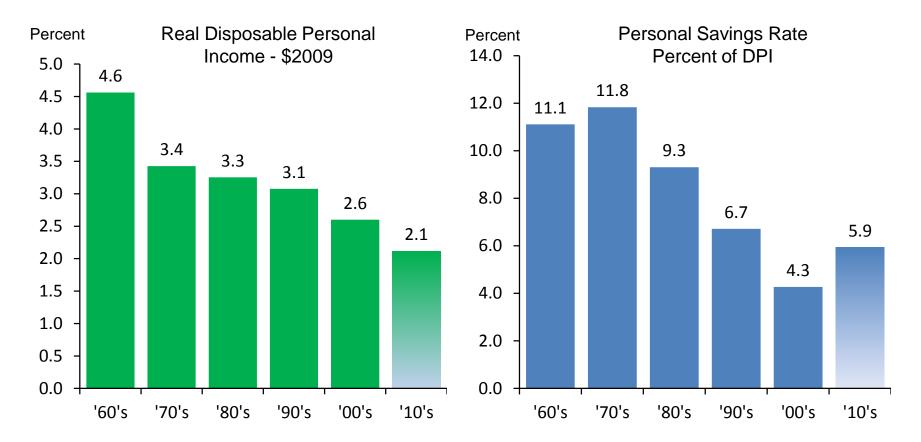
Income and Savings Rate

Percent Change and Percent of DPI



Real DPI & Personal Savings Rate

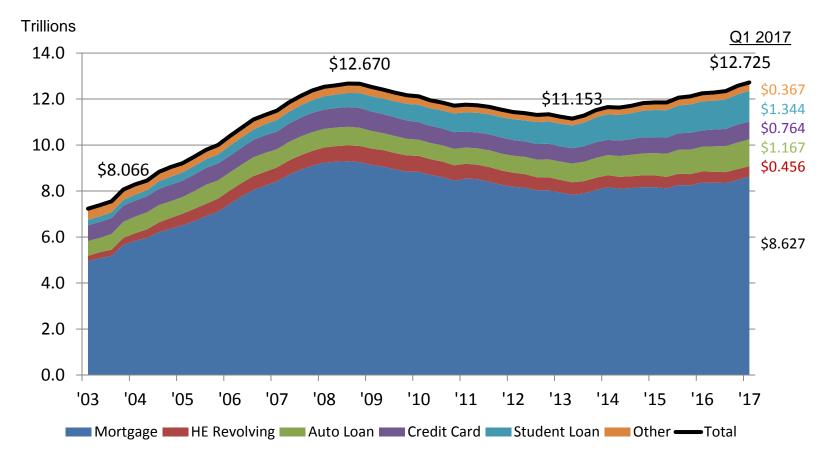
As Percent of Personal Income



Source: U.S. Bureau of Economic Analysis

Total Consumer Debt by Composition

Trillions of Dollars



Source: Federal Reserve Bank of New York and Equifax

Interest Payments

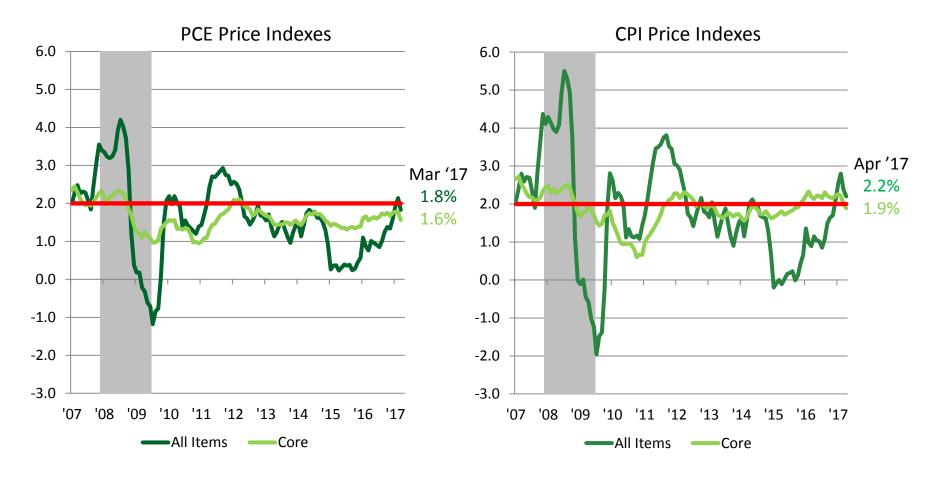
As a Percent of Disposable Personal Income



Source: Federal Reserve Bank - Board of Governors

Inflation – PCE & CPI Price Index

Percent Change Yr / Yr



Source: U.S. Department of Labor: Bureau of Labor Statistics data.

Initial Unemployment Claims

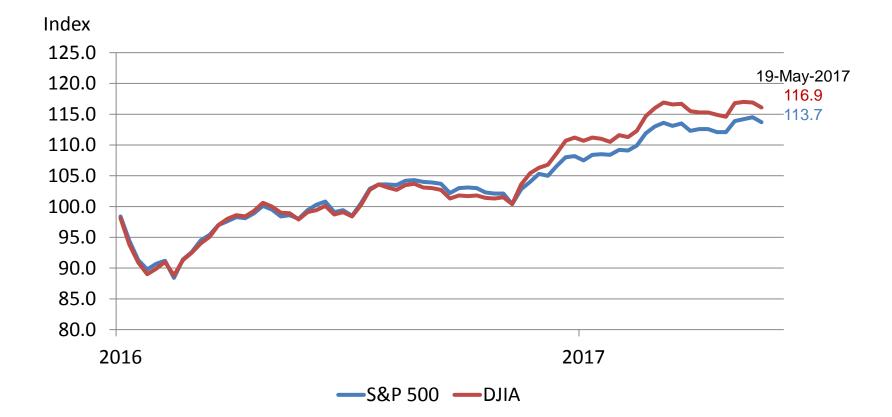
Monthly Average as Percent of Nonfarm Employment



Source: U.S. Bureau of Labor Statistics

Stock Markets

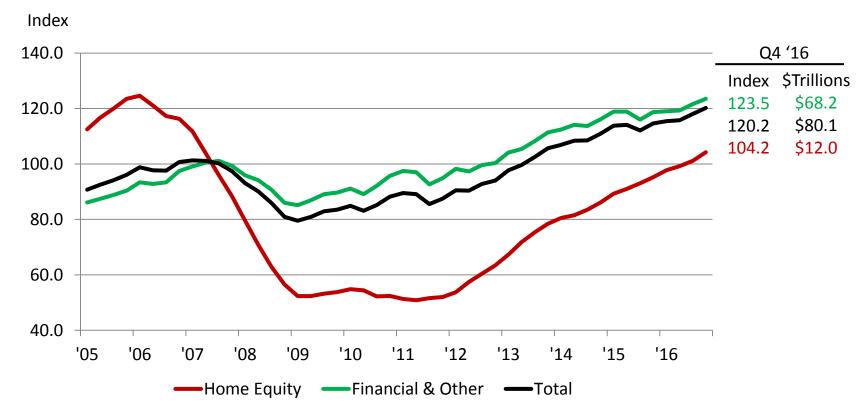
S&P 500 and Dow Jones Industrial Average – Index 2016 = 100



Source: U.S. Bureau of Economic Analysis

Real Household Net Worth

Home Equity and Financial & Other - Index 2007 = 100, \$2009

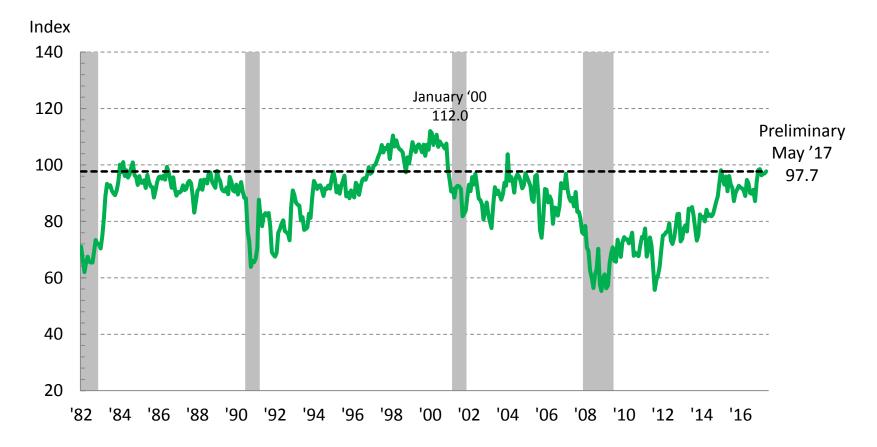


Note: Total Household Net Worth in Current Dollars is \$89.3 Trillion.

Source: Author's calculations using Federal Reserve data.

Consumer Sentiment

University of Michigan



Source: Thomson Reuters / University of Michigan

Monetary Policy Employment & Inflation

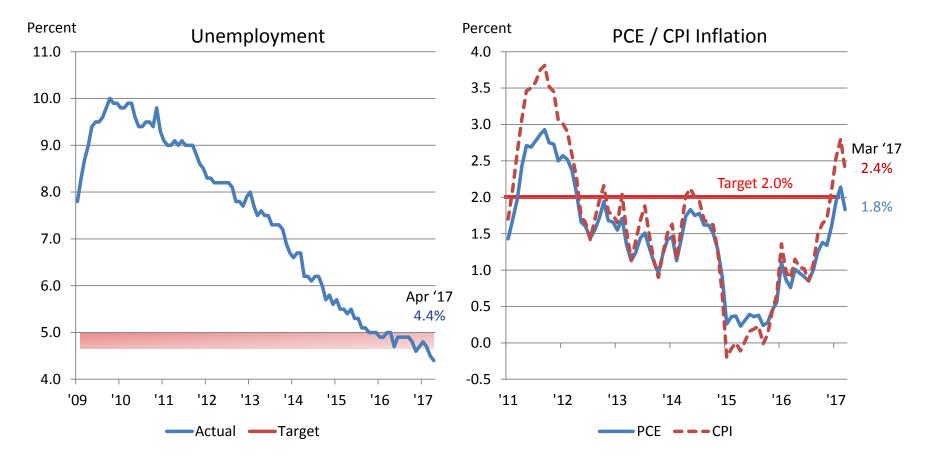
F.O.M.C Statement

May 3, 2017

- 1. Information since the F.O.M.C. met in March indicates that the labor market has continued to strengthen even as growth in economic activity has slowed.
- 2. Job gains were solid, on average, in recent months, and the unemployment rate has declined.
- 3. Household spending rose only modestly, but fundamentals underpinning the continued growth of consumption remained solid. Business fixed investment firmed. Inflation measured on a 12-month basis recently has been running close to the Committee's 2 percent longer-run objective.
- 4. Excluding energy and food, consumer prices declined in March and inflation continued to run somewhat below 2 percent.
- 5. Market based measures of inflation compensation remained low; survey based measures of longer-term inflation expectations are little changed, on balance.

Unemployment Rate & Prices

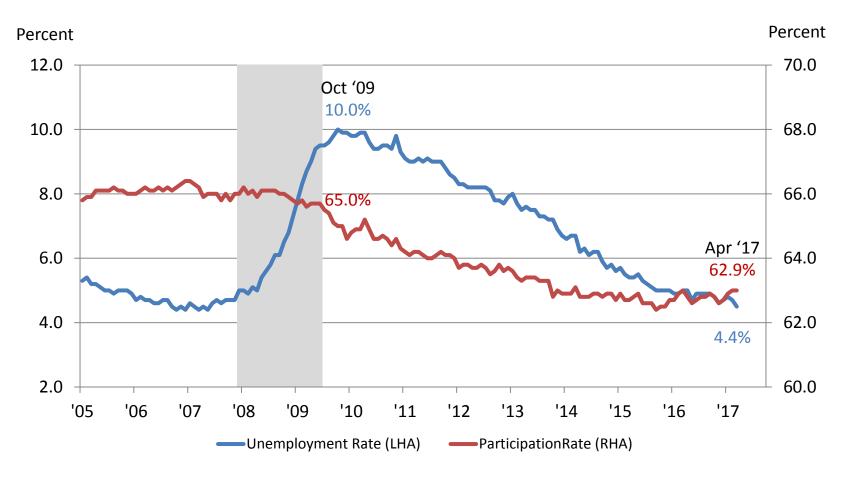
Percent Unemployed, PCE / CPI % Change Yr./Yr.



Source: U.S. Department of Labor: Bureau of Labor Statistics, Bureau of Economic Analysis and the Federal Reserve

Unemployment & Participation Rate

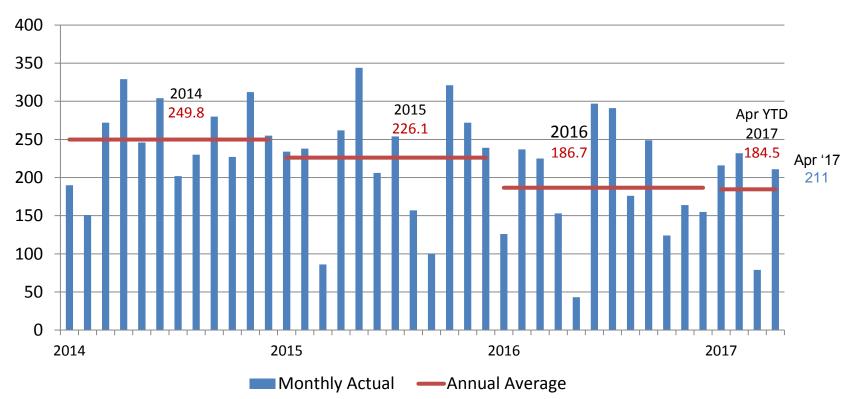
Percent Unemployed & Percent of Labor Force



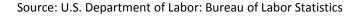
Source: U.S. Department of Labor: Bureau of Labor Statistics

U.S. Nonfarm Payrolls

Monthly and Annual Average Job Change – In Thousands



Thousands



Initial Unemployment Claims

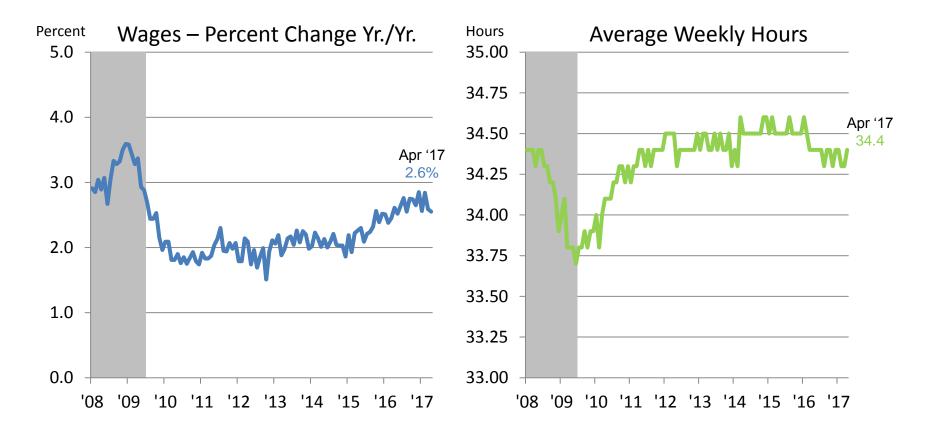
Monthly Average as Percent of Nonfarm Employment



Source: U.S. Bureau of Labor Statistics

Wages and Hours

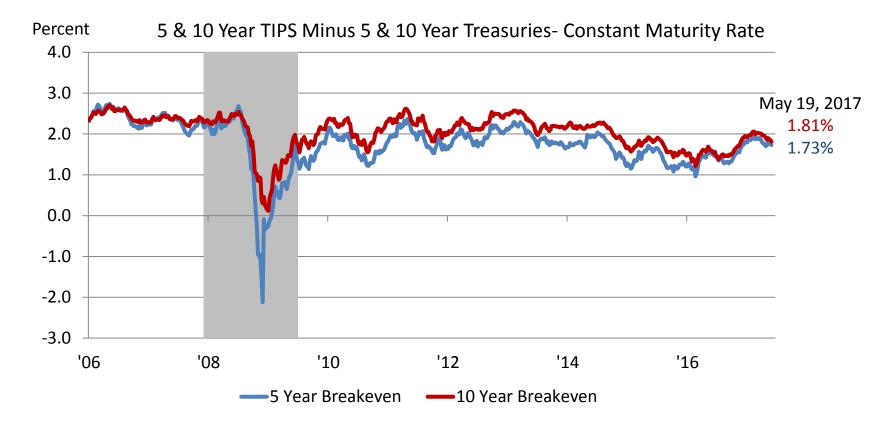
Total Private – All Employees



Source: U.S. Department of Labor: Bureau of Labor Statistics , Bureau of Economic Analysis and the Federal Reserve

Inflation Compensation

5 Year and 10 Year Inflation Expectations

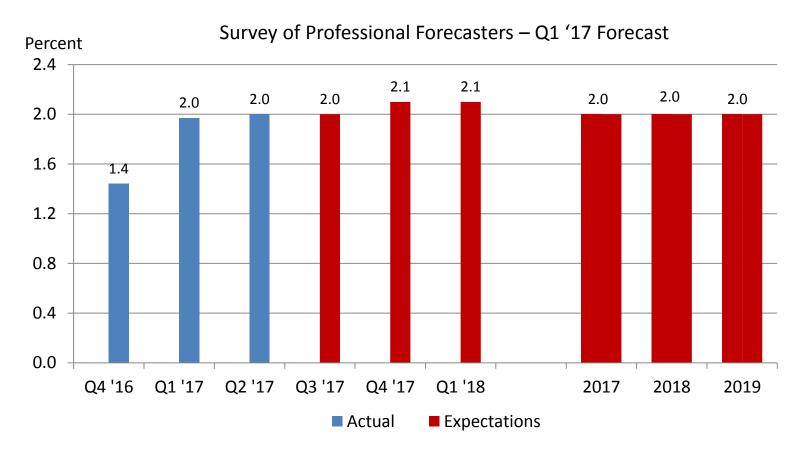


Source: Author's calculation using Federal Reserve System data.

Source: U.S. Department of Labor: Bureau of Labor Statistics , Bureau of Economic Analysis and the Federal Reserve

Inflation Expectations

Headline PCE Inflation – Yr./Yr. & Q4/Q4



Source: Bureau of Economic Analysis and FRB Philadelphia Q4 '16 Survey

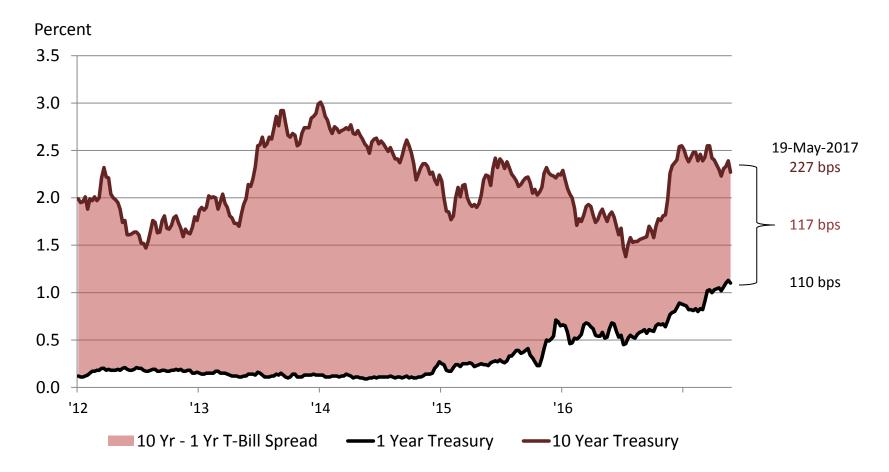
Corporate Bond Spreads

AAA and BB+ Junk Bonds – 5 & 10 Year Durations



Yield Curve

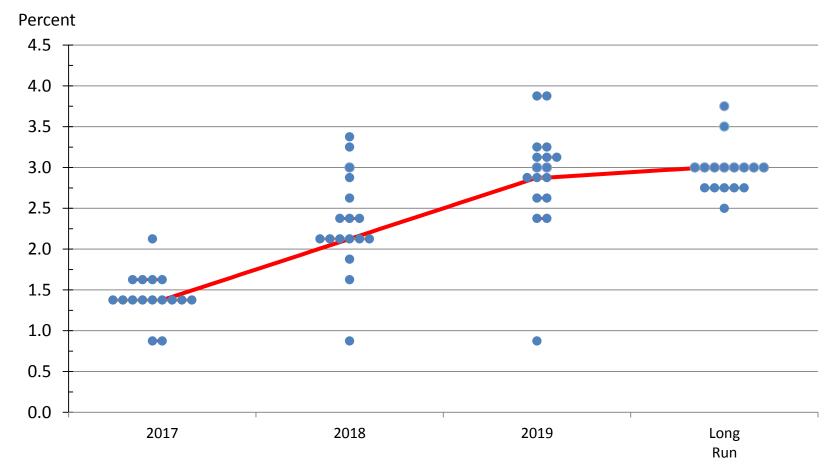
10 Year – 1 Year Treasuries in Basis Points



Source: Board of Governors – Federal Reserve System

Appropriate pace of policy firming

Fed Funds Rate – Year End Projections

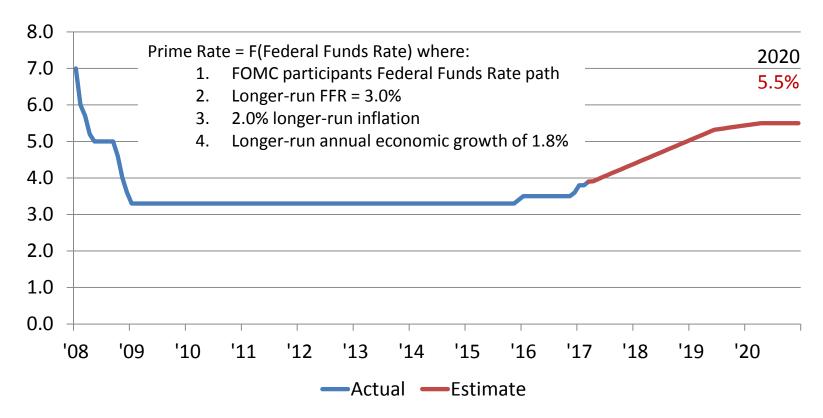


Source: Federal Reserve - F.O.M.C. participants, March 15, 2017

Prime Rate

Bank Prime Loan Rate – In Percent

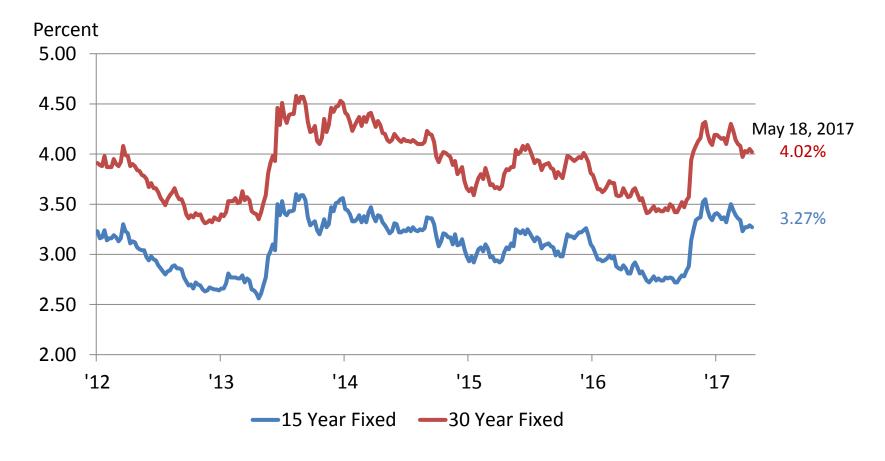
Percent



Source: Author's calculation using Board of Governors – Federal reserve Bank data.

Mortgage Rates

15 & 30 Year Fixed Rate – U.S. Average

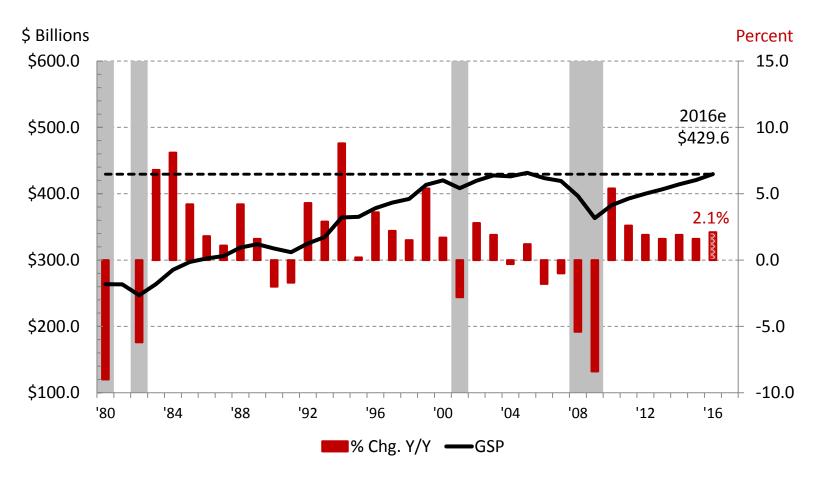


Federal Reserve Bank of Chicago

Michigan Economy

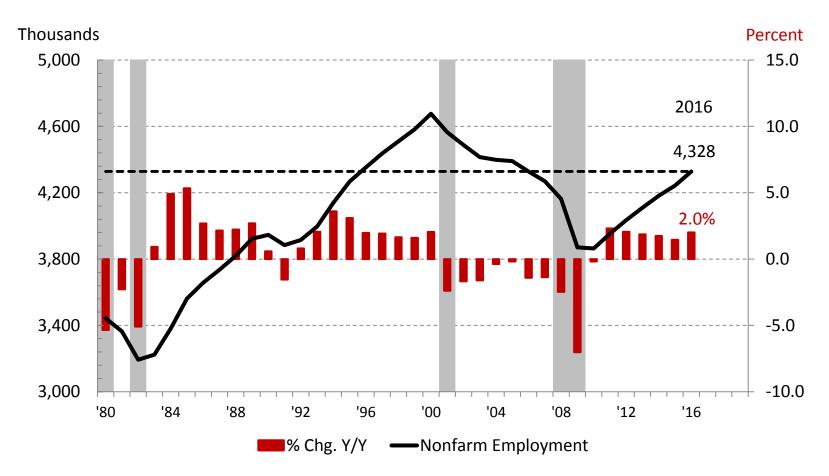
Michigan Real GSP

Billions Chained \$2009, % Change Q/Q at SAAR



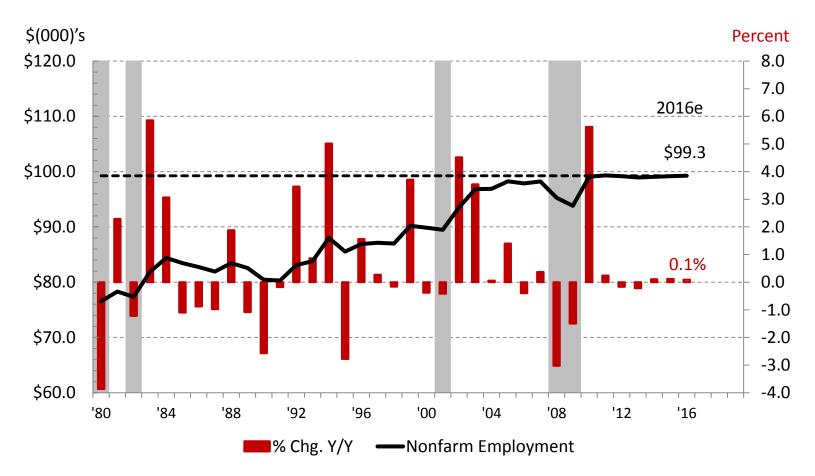
Michigan Nonfarm Employment

Billions Chained \$2009, % Change Q/Q at SAAR



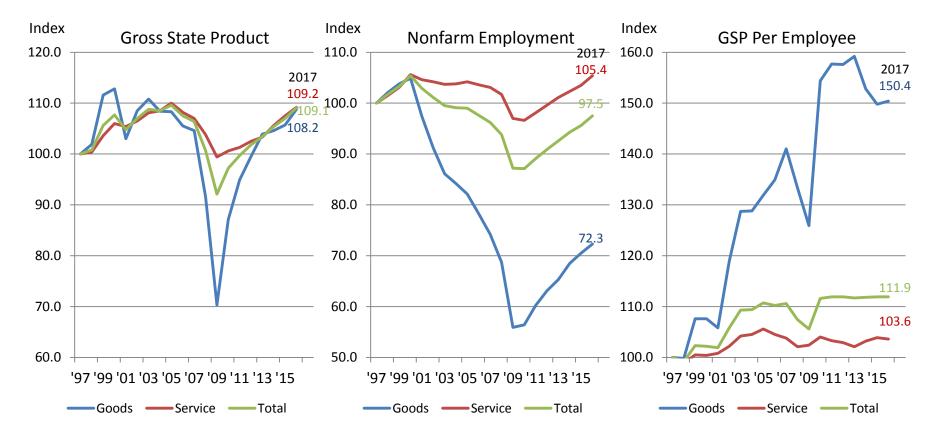
Michigan GSP Per Nonfarm Employment

Thousands of Chained \$2009, % Change Y/Y



Michigan Real GSP and Nonfarm Employment

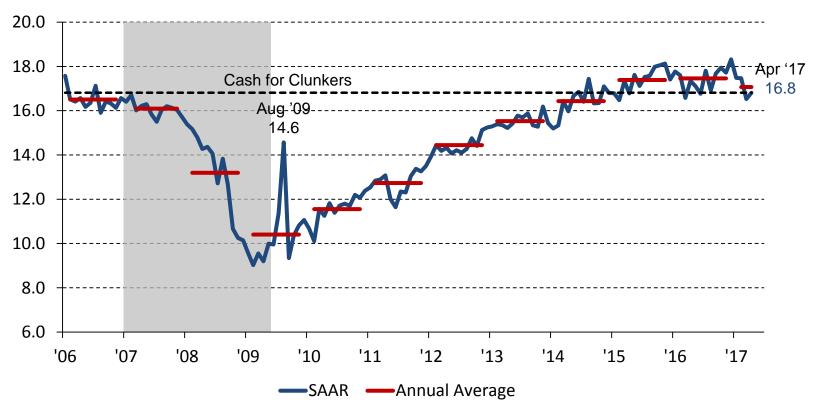
By Goods and Service Producing Sectors – Index, 1997 = 100



U.S. Light Vehicle Sales

S.A.A.R – Millions of Units

Millions



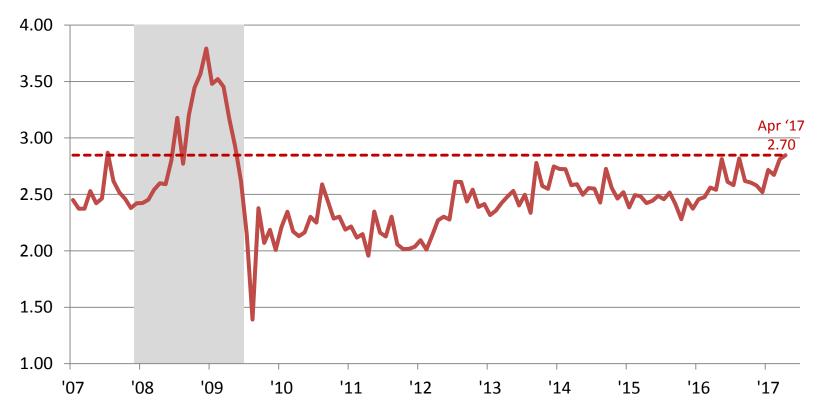
Note: Total 2016 Light Vehicle Sales: 17,465,020 / Including M/H: 17,866,260.

Source: Ward's Automotive and BEA

Inventory to Sales Ratio

Total Light Vehicles - SA

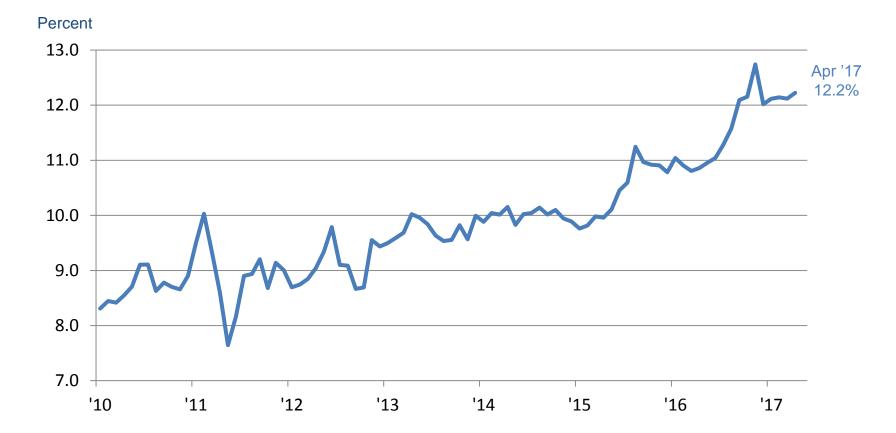
Percent



Source: U.S. Census Bureau and WardsAuto.

U.S. Light Vehicle Incentives

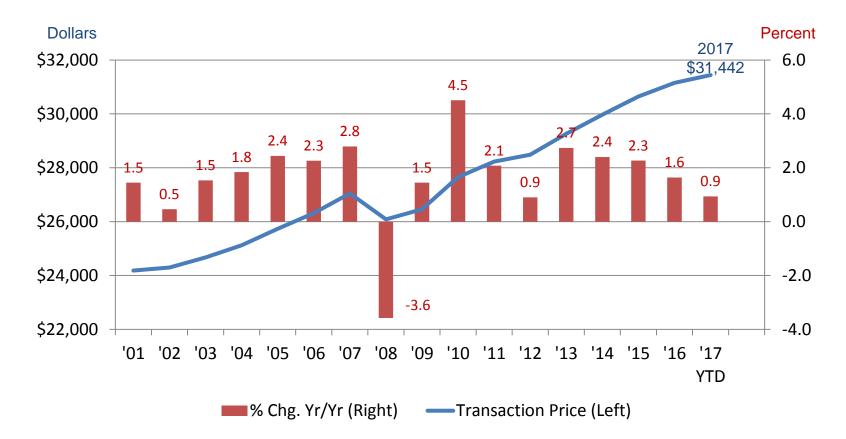
As Percent of Transaction Price - SA



Source: Author's calculation using Ward's Automotive and J.D Power data.

Light Vehicle Transaction Price

Annual Average & Percent Change Yr./Yr.

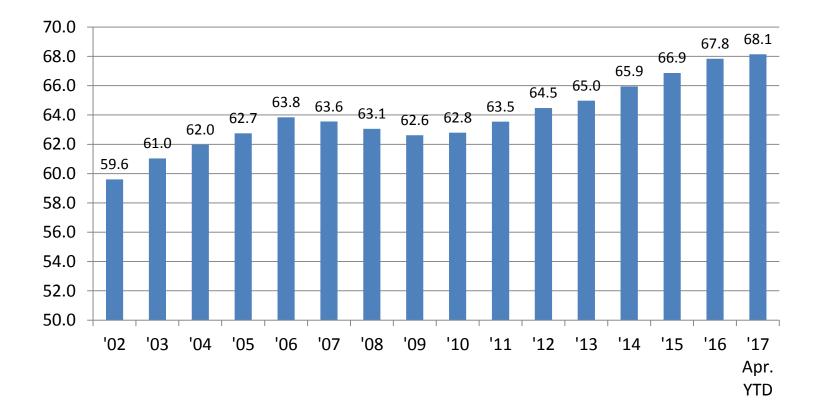


Source: Author's calculation using J.D Power data.

Federal Reserve Bank of Chicago

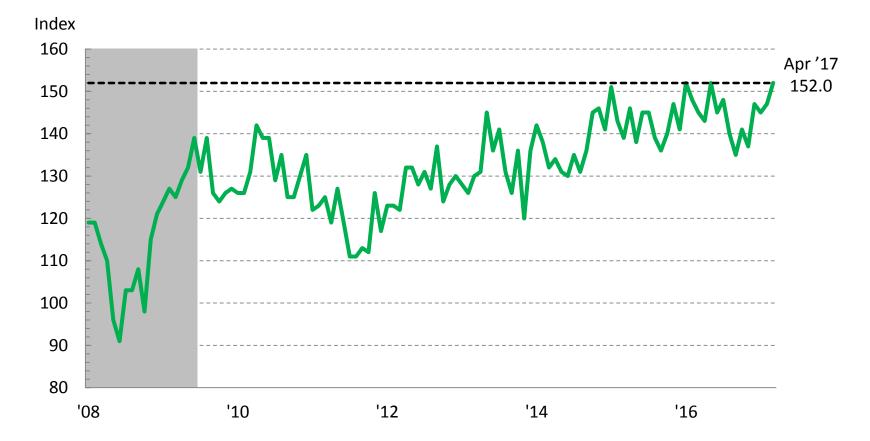
Finance Term

Length of Loan in Months



Buying Conditions for Vehicles

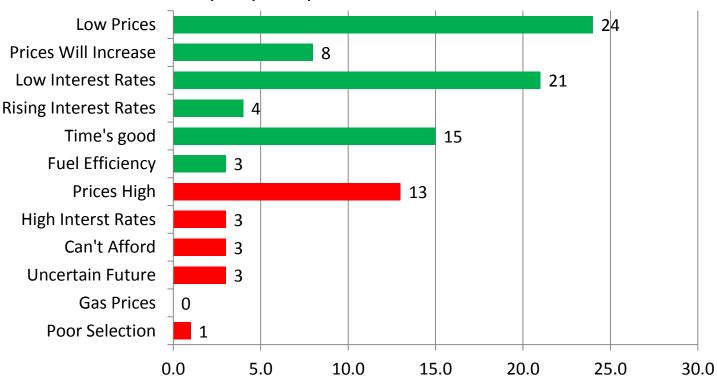
University of Michigan



Source: Thomson Reuters / University of Michigan

Reasons for Buying Conditions for Vehicles

University of Michigan – Survey of Consumers, April 2017



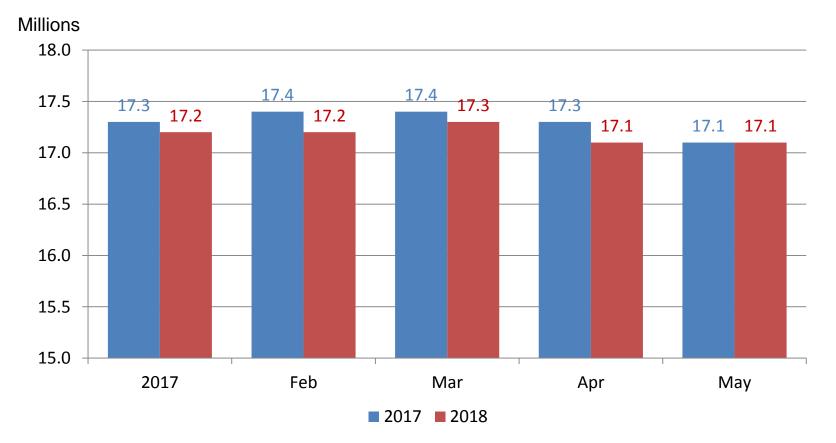
Good / Bad Reason: Why do you say so?

Note: May add to more than a 100 due to multiple mentions.

Source: University of Michigan Survey of Consumers

U.S. Light Vehicle Sales

2017 & 2018 Forecast - Millions of Units

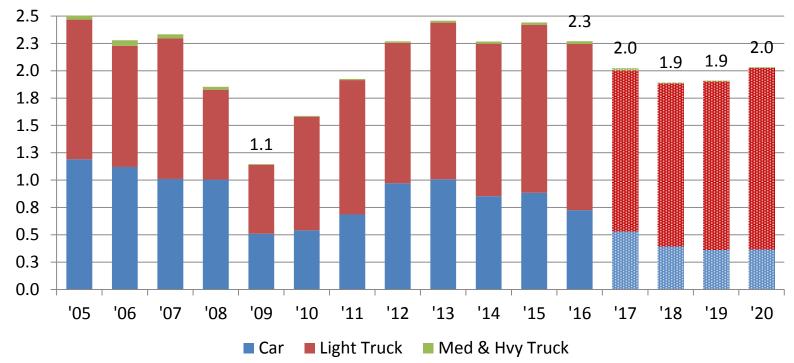


Source: Blue Chip Indicators - May, 2017 Consensus.

Michigan Vehicle Production

Millions of Units

Millions



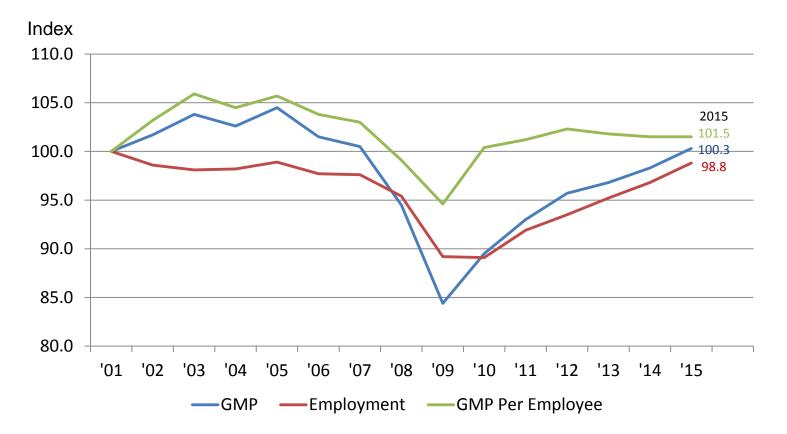
Note: 2016 Total Vehicle Production Including M/H: 18,148,667.

Source: Ward's Automotive

May 25, 2017

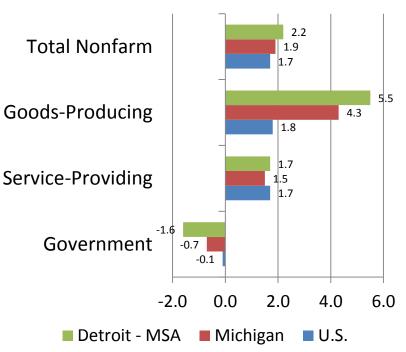
Detroit-Warren-Dearborn MSA

Real GMP, Nonfarm Employment, and GMP Per Employee– Index, 1997 = 100

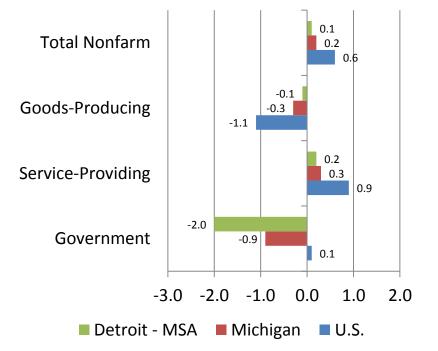


U.S. Michigan, and Detroit MSA¹ Employment

Compound Annual Growth Rate



CAGR - March 2010 to March 2017

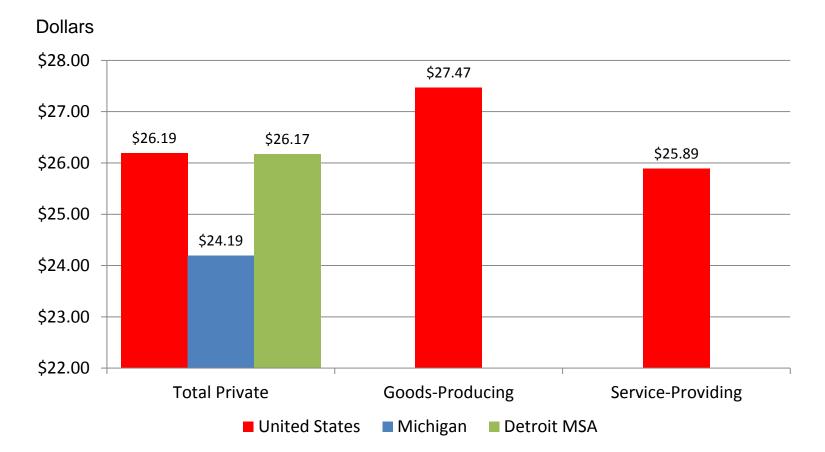


CAGR - March 2007 to March 2017

1. Detroit-Warren-Dearborn MSA

Hourly Earnings

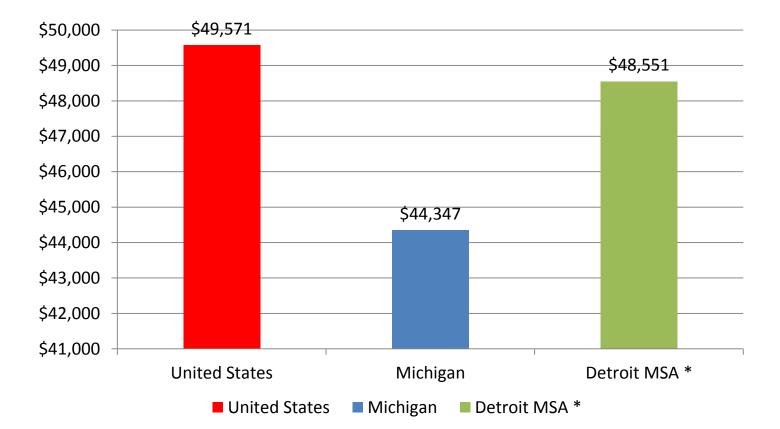
Total Private Average Hourly Earnings by Sector Total – In Current Dollars, March 2017



Source: U.S. Bureau of Labor Statistics data.

Per Capita Income

United States, Michigan, and Detroit MSA, In Current 2016 Dollars



* Detroit-Warren-Dearborn MSA – 2016 Per Capita Income Estimate

Source: U.S. Bureau of Economic Analysis data.



